

EXAMINER'S AMENDMENT & STATEMENT OF REASONS FOR ALLOWANCE

Table of Contents

<i>Amendments & Claim Status</i>	2
<i>Amendment to the Specification</i>	2
<i>Amendment to the Claims</i>	3
<i>Allowable Subject Matter</i>	11
<i>Conclusion</i>	12

Amendments & Claim Status

[1] This Examiner's Amendment is responsive to the telephone interview dated Jul. 13, 2009. Claims 1-6, 8-15, 17-21, 23-29, 31, and 37-38 remain pending; claims 7, 16, 22, 30, 32-36, and 39-40 cancelled.

[2] An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Amendment to the Specification

Fig. 11(a) is an explanatory diagram illustrating an example of a superimposed image generated by combining the first object region of Fig. 9(d), a second object region of Fig. 10(d) ~~11(d)~~, and a background portion; Fig. 11(b) is an explanatory diagram illustrating an example of a superimposed image where the first object region is translucent; and Fig. 11 (c) is an example of a superimposed image where the second object region is translucent.

Specification at 37, Feb. 8, 2005.

Fig. 39(a) is an explanatory diagram illustrating an example of a difference image generated from the first object image of Fig. 37(a) and the corrected second object image of Fig. 38(c); Fig. 39(b) is an explanatory diagram illustrating an example of a label image generated from the difference image of Fig. 39(a); and Fig. 39(c)

Art Unit: 2624

39(d) is an explanatory diagram illustrating an example of a label image obtained by removing noise portions from the label image of Fig. 39(b).

Specification at 41-42, Feb. 8, 2005.

[3] Authorization for the examiner's amendment below was given in a telephone interview with Robert Downs (Reg. No. 48,222) on Jul. 13, 2009.

Amendment to the Claims

1. (Previously Presented) An image combination device, comprising:
amount of background correction calculating means for calculating an amount of background correction or reading out the amount of background correction after the amount of background correction is calculated and recorded, the amount of background correction being performed among (i) a background image, which is an image of a background, (ii) a first object image, which includes at least a part of the background and a first object, and (iii) a second object image, which includes at least a part of the background and a second object, the amount of background correction being one or a combination of relative amounts including an amount of movement, an amount of rotation, a rate of expansion or reduction, and an amount of distortion correction, with respect to a background;

superimposed image generating means for generating a superimposed image by using one of the background image, the first object image, and the second object image as a standard image, correcting the other two images by the amount of background correction obtained from the amount of background correction calculating means, the other two images being corrected so that backgrounds, other than objects, of the other two images correspond to the standard image at least partially, and superimposing the standard image and one or both of the other two images; and

object region extracting means for extracting a region of the first object and a region of the second object from a difference image generated from the standard image and the other one or two corrected images,

Art Unit: 2624

the superimposed image generating means superimposing the standard image and the regions of the one or two corrected images obtained from the object region extracting means, instead of superimposing the standard image and the one or two corrected images.

2. (Original) The image combination device as set forth in claim 1, further comprising:
image pickup means for picking up an image of an object or a scene,
the background image, the first object image, or the second object image being generated based on an output of the image pickup means.

3. (Previously Presented) The image combination device as set forth in claim 2, wherein:
either of the first object image or the second object image that is photographed earlier is used as the standard image.

4. (Original) The image combination device as set forth in claim 3, wherein:
the background image is photographed immediately before or immediately after the standard image is photographed.

5. (Original) The image combination device as set forth in claim 1, wherein:
the superimposed image generating means superimposes the standard image and the other one or two corrected images respectively at predetermined transmittances.

6. (Currently Amended) The image combination device as set forth in claim 1, wherein:
the superimposed image generating means generates a difference image from the standard image and the other one or two corrected images, and a region in the difference image that has a difference is generated as an image having a pixel value that is different from an original pixel value.

7. (Canceled)

Art Unit: 2624

8. (Previously Presented) The image combination device as set forth in claim 1, further comprising:

overlap detecting means for detecting overlap between the region of the first object and the region of the second object obtained from the object region extracting means.

9. (Previously Presented) The image combination device as set forth in claim 8, further comprising:

overlap warning means for warning a user and/or the object that there is overlap, when overlap is detected by the overlap detecting means.

10. (Original) The image combination device as set forth in claim 8, further comprising:
shutter release timing notifying means for notifying the user and/or the object that there is no overlap, when no overlap is detected by the overlap detecting means.

11. (Original) The image combination device as set forth in claim 8, further comprising:
image pickup means for picking up an image of an object or a scene; and
automatic shutter releasing means for generating an instruction when no overlap is detected by the overlap detecting means, the instruction instructing that the image obtained from the image pickup means be recorded as the background image, the first object image, or the second object image.

12. (Original) The image combination device as set forth in claim 8, further comprising:
image pickup means for picking up an image of an object or a scene; and
automatic shutter releasing means for generating an instruction when overlap is detected by the overlap detecting means, the instruction instructing that the image obtained from the image pickup means should not be recorded as the background image, the first object image, or the second object image.

13. (Original) The image combination device as set forth in claim 8, wherein:

Art Unit: 2624

the overlap detecting means extracts an overlap region where the region of the first object and the region of the second object overlap.

14. (Original) The image combination device as set forth in claim 13, wherein:

the superimposed image generating means generates the superimposed image in such a manner that the overlap region extracted by the overlap detecting means has a pixel value that is different from an original pixel value.

15. (Original) The image combination device as set forth in any one of claims 8 to 14, further comprising:

overlap prevention method calculating means for calculating a position or a direction of the position of the first object or the second object when overlap is detected by the overlap detecting means, the position being a position at which the overlap is reduced; and

overlap prevention method notifying means for notifying the user and/or the object of the position or the direction of the position of the first object or the second object, the position or the direction of the position being obtained from the overlap prevention method calculating means.

16. (Canceled).

17. (Previously Presented) An image combination device, comprising:

amount of background correction calculating means for calculating an amount of background correction or reading out the amount of background correction after the amount of background correction is calculated, the amount of background correction being performed among (i) a first object image, which includes a background and a first object, and (ii) a second object image, which includes at least a part of the background and a second object, the amount of background correction being one or a combination of relative amounts including an amount of movement, an amount of rotation, a rate of expansion or reduction, and an amount of distortion correction, with respect to a background;

superimposed image generating means for generating a superimposed image by using one of the first object image or the second object image as a standard image, correcting the other of

Art Unit: 2624

the first object image or the second object image by the amount of background correction obtained from the amount of background correction calculating means, so that a background portion, other than the object, of the other of the first object image or the second object image corresponds to the standard image at least partially, and superimposing the standard image and a corrected image; and

object region extracting means for extracting a region of the first object and a region of the second object from a difference image generated from the standard image and the corrected image,

the superimposed image generating means superimposing (a) the standard image or the corrected image and (b) images within the regions obtained from the object region extracting means, instead of superimposing the standard image and the corrected image.

18. (Original) The image combination device as set forth in claim 17, further comprising:
image pickup means for picking up an image of an object or a scene,
the first object image or the second object image being generated based on an output of the image pickup means.

19. (Original) The image combination device as set forth in claim 18, wherein:
the first object image or the second object image that is photographed later than the other is used as the standard image.

20. (Original) The image combination device as set forth in claim 17, wherein:
the superimposed image generating means superimposes the standard image and the corrected image respectively at predetermined transmittances.

21. (Currently Amended) The image combination device as set forth in claim 17, wherein:

the superimposed image generating means generates a difference image from the standard image and the corrected image, and a region in the difference image that has a

Art Unit: 2624

difference is generated as an image having a pixel value that is different from an original pixel value ~~so that the region stands out visually.~~

22. (Canceled)

23. (Previously Presented) The image combination device as set forth in claim 17, wherein:

the object region extracting means extracts an image within the region of the first object and an image within the region of the second object from the first object image or a corrected first object image, extracts an image within the region of the first object and an image within the region of the second object from the second object image or a corrected second object image, and discriminates between an image of the first object and an image of the second object by using skin color as a benchmark.

24. (Previously Presented) The image combination device as set forth in claim 17, wherein:

the object region extracting means extracts an image within the region of the first object and an image within the region of the second object from the first object image or a corrected first object image, extracts an image within the region of the first object and an image within the region of the second object from the second object image or a corrected second object image, and discriminates between an image of the first object and an image of the second object by using, as a benchmark, a characteristic of an image outside each region.

25. (Previously Presented) The image combination device as set forth in claim 17, further comprising:

overlap detecting means that judges that the region of the first object and the region of the second object overlap, when the number of regions of the first object or the second object obtained from the object region extracting means does not correspond to a value set as the number of objects to be combined.

Art Unit: 2624

26. (Original) The image combination device as set forth in claim 25, further comprising:
overlap warning means for warning the user and/or the object that there is overlap, when
overlap is detected by the overlap detecting means.

27. (Original) The image combination device as set forth in claim 25, further comprising:
shutter release timing notifying means for notifying the user and/or the object that there is
no overlap, when no overlap is detected by the overlap detecting means.

28. (Original) The image combination device as set forth in claim 25, further comprising:
image pickup means for picking up an image of an object or a scene; and
automatic shutter releasing means for generating an instruction when no overlap is
detected by the overlap detecting means, the instruction instructing that the image obtained from
the image pickup means be recorded as the first object image or the second object image.

29. (Original) The image combination device as set forth in claim 25, further comprising:
image pickup means for picking up an image of an object or a scene; and
automatic shutter releasing means for generating an instruction when overlap is detected
by the overlap detecting means, the instruction instructing that the image obtained from the
image pickup means should not be recorded as the first object image or the second object image.

30. (Canceled).

31. (Currently Amended) An image combination program encoded within a computer-readable medium, wherein the device set forth in claim 1 includes said computer-readable medium to, when executed by for causing a computer, perform the to functions as each means of the image combination device as set forth in any one of claims claim 1, 17, 37, and 38.

32. (Cancelled)

33. (Canceled).

34. (Canceled).

35. (Canceled).

36. (Canceled).

37. (Currently Amended) An image combination device, comprising:

amount of background correction calculating means for calculating an amount of background correction or reading out the amount of background correction after the amount of background correction is calculated and recorded, the amount of background correction being performed among (i) a background image, which is an image of a background, (ii) a first object image, which includes at least a part of the background and a first object, and (iii) a second object image, which includes at least a part of the background and a second object, the amount of background correction being one or a combination of relative amounts including an amount of movement, an amount of rotation, a rate of expansion or reduction, and an amount of distortion correction, with respect to a background; and

superimposed image generating means for generating a superimposed image by using one of the background image, the first object image, and the second object image as a standard image, correcting the other two images by the amount of background correction obtained from the amount of background correction calculating means, the other two images being corrected so that backgrounds, other than objects, of the other two images correspond to the standard image at least partially, and superimposing the standard image and one or both of the other two images, wherein:

the superimposed image generating means generates a difference image from the standard image and the other one or two corrected images, and a region in the difference image that has a difference is generated as an image having a pixel value that is different from an original pixel value so that the region stands out visually.

38. (Currently Amended) An image combination device, comprising:

Art Unit: 2624

amount of background correction calculating means for calculating an amount of background correction or reading out the amount of background correction after the amount of background correction is calculated, the amount of background correction being performed among (i) a first object image, which includes a background and a first object, and (ii) a second object image, which includes at least a part of the background and a second object, the amount of background correction being one or a combination of relative amounts including an amount of movement, an amount of rotation, a rate of expansion or reduction, and an amount of distortion correction, with respect to a background; and

superimposed image generating means for generating a superimposed image by using one of the first object image or the second object image as a standard image, correcting the other of the first object image or the second object image by the amount of background correction obtained from the amount of background correction calculating means, so that a background portion, other than the object, of the other of the first object image or the second object image corresponds to the standard image at least partially, and superimposing the standard image and a corrected image, wherein:

the superimposed image generating means generates a difference image from the standard image and the corrected image, and a region in the difference image that has a difference is generated as an image having a pixel value that is different from an original pixel value ~~so that the region stands out visually.~~

39. (Canceled).

40. (Canceled).

Allowable Subject Matter

[4] **Claims 1-6, 8-15, 17-21, 23-29, 31, and 37-38** allowed.

[5] The following is a statement of reasons for the indication of allowable subject matter:

Regarding **claims 1, 17, 31, and 37-38**, see Office Action at 6, May 177, 2009.

Art Unit: 2624

Conclusion

[6] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578 and fax number (571)270-2578. The examiner can normally be reached Monday - Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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